SEQUENCE LISTING

<110> Aventis CropScience GmbH

<120> Promoters for gene expression in caryopses of plants

<130> AGR 2000/M 215

<140> DE 100 32 379.0
<141> 2000-07-06

<160> 16

<170> PatentIn Ver. 2.1

<210> 1
<211> 5058
<212> DNA
<213> Triticum aestivum

<400> 1
tctagagagg tcacccgtca gtctatccta agcgtgaagg ggtcatgagc caatcactct 60
aagcactcct gcacgtggcg cgactggtcg gggaccaagc ccacctctat atacacagca 120
ggcatgccgc tcaccccaac aatcagcccg cagtctgtac tgtgacatca ggcagagctt 180
tcgggaggaa ctgacgacgc tgaggggccc atacaccata atcccacggg gtgattagtg 240
tgtatatgcc agtgacagtc tcagatcaaa tactcaaatc ttgttgagcg tgttattaag 300
aaataacctt ggacatcgac cagggcccag gcccacttct ctcctaggtg gtctctacct 360
gccttgtcgt tccgccacgt tgaatcactc gaggctgtcg ggaacccagg cctatcacta 420
cctagatggt accatctatt ccttcagccc ttagttcgaa cattatcata agtattacgt 480
tattatatag tatatctgtg atcattggcc aaagagacca cggctcaata atgtagcaat 540
gcaaacggtg agactctagc agacaactaa catttattta ctttgcagcg aagcacgggt 600
gattcaagat agttctaatt tttttaaaga cggttctaat tctttttttt acggcaacac 660
ggttctaatt ctaccgttgc aacgcacaag gagatgtgct ggtctctaac aatgtatgta 720
ggagtttttt gttgcatgga tcggacggtt gaagatcgta atataagtca cctttgacgg 780
tcgggaaaat ggcggttatt tctgtgtttt cagacggctg acgcctggca atcaccccaa 840
aaatattttt gtatgcgagg aggatcacct gccgccggct gacatccgcc acatcagtag 900
gttaggccaa ctcctccgct tgccaccgaa ttaagctcgc tgaaaagttc ccctcccgac 960
gcttcgcagg taggtaggtg catccatccc caactccccg gccgtgccgc acacccccat 1020
ctatatatgc aaatccagtc cattcctgat caaccaggac ttgattagta gagcaagagg 1080
cctgaacaag cacgcgctcg cagatcatcg acatgggttg tgagaggacg ccgctggccg 1140
ttgctctggc actggccctg ctcctgggcc tcgcccacgg cgacgtggtg cagttcatct 1200
tcggcgactc gctgtcggac gtgggcaaca acaactacct gaccaagagc ctcgcgcgcg 1260
cggcgctgcc gtggtacggc atcgacttcg gcagcggcat gcccaacggc aggttctgca 1320
acggccgcac cgtcgcggac atcatcggcg acaagatggg cctcccgcgc ccgcccgcgt 1380
tcctggaccc gtccgtggac gagaccgtca tcgccaagag cggcctcaac tacgcgtccg 1440
gcggcggcgg catcctcaac gagacctcgt ccctcttcgt aagacaccca tccatcactt 1500
caccaacttc tcgtagctag acagcatggt agtatcatga gacatgaacg ctccggttcg 1560
atcatcgcat ctgactgaga cccatggcgc atgcatttgc agatccagag gttctcgctg 1620
tacaagcaga tcgagctgtt ccaggggacg caggcgttca tgcgggagaa gatcgggcgg 1680
gcggcggcgg acaagctgtt cggcgaggcc tactacgtgg tggccatggg cgccaacgac 1740
ttcatcaaca actacctgct ccccgtctac tccgactcgt ggacctacaa cggcgacacc 1800
ttcgtcaagt acatggtcac caccctggag gcccagctcc ggctcctgca cgggctgggc 1860
gcgcgccggg tcaccttctt cgggctgggg cccatgggct gcatcccgct gcagcggctc 1920
ctgcagaggt cctccacggc gtgccaggag tccaccaaca agctcgccct cagcttcaac 1980
aagcaggccg gcgcggtgat cagggagctg gcggcgtcgc tgcccaacgc cacgttccag 2040
ttcggggacg tctacgacta cttccaggac atcatcgacc gcccctacat gcacggcttc 2100
aacaactccc acgcgccctg ctgcacgctc ggcaaggtgc ggccgaccct gacgtgcacc 2160
ccgctctcca cgctctgcaa ggaccgcagc aagtacgtgt tctgggacga gtaccacccc 2220
accgacaggg ccaacgagct catcgcgctc gagacgctca agcggctcaa catcaccgtc 2280

gttgccaaca ccacctccag ctagcctgcc tgcctgccac cgacgccgcc caccaaaatg 2340
cgtacgcttc gacatgcatg ggcgctgctg ctgtgtgttg tcttaattat actgcgggtg 2400
cttcgattgt aaccaaagta ggatgatcga aaattctagg atgatgtcca agaaatggga 2460
tggagaatag atgcatgtac gtgtcctgga tatgaaattt ttttgagtat gagagaacag 2520
cataccagga tcatgcatct atcttaaatc tcaagaggcc actattaaga cgttgatgtt 2580
taagacggtg atgttctatt tgcatgtgaa atttcaagtt caaagacggt accatttatg 2640
agctatggaa tcagccatga atagtgatgt ttactgttga cactattcat tgctgctttt 2700
gtcttttggt aatgtgtttg aacttggaaa tttcacatac taatagaaca tcacactctt 2760
aagacgtaat atttctttga gattttattt ttgaaacttc gcctgaaggg tgctgatgtg 2820
cccgctattc atctaggaga ctaggaaaat atatgcaaaa aaattcatac atatttaaaa 2880
atgataaata tgtatagaga aaatgtttat caactataga aaaatatatg caaaaaatat 2940
aaatatgtat gaattttttt agcaagtatt taaatctagc atttgaaaga aaaataaaca 3000
agtattagaa aaatgttaaa cgtgtataga aaaatgttac catgtaatta aaaattgtat 3060
aaaattatca tgtattttta aaaaaataac caagcattta aaaacaaata tttaaaaatg 3120
ttaataaagg atttgaaaaa ttctaaacgt gtatacaaaa atgttgacca tgtattaaaa 3180
aatgttaatc ttgtatttaa aaatgtaatc aagcatttag aaaaacagtt aaattgtata 3240
gaaatgtacc cagaaaatct tgatattata tttcaaaaat gtaatcaagc atttgaaaaa 3300
tattttaaaa atgtgtatag aaaaaatgtt aaccatgtat ttaaaaaatt ttaaacttgt 3360
atttgaaaca tgttaatcat gtattagata tataccaaat atgtatgtaa aataacaatg 3420
aaaatccaag ggaaacgaaa gaaaaacaaa tgaaaacggg aaaaaaacaa aaaatgaagg 3480
aaaaaaaaga aaaaacattg aaaaccaaga aagaaacaaa gagaaccgga gaataacaaa 3540
caaaagggaa agaaaaggtg aaaaaactag taaaaacaag aaacaaagaa aaaaggatga 3600
caaacaagga aaaaaattaa aaatccggaa aggcaacggt aagacgactc ttttccttca 3660
agttggtagc gccctaccag ggtaacacga acttgacgat gactttatgg ctaggagagc 3720
tacgctggaa cgaggagatc cggaccaaac catgtgcgct acaaaagtgt attattattt 3780
tttgcaaaaa tgatccgaat ctattatcaa aattcagcga aatacaaaac atctcgaaca 3840
taatgaacaa tacattgaga ttccaggacc ccaaacaacc actactgccg cgaagaaaaa 3900
aggattggga ggacagaaat tatcctaacc acgttcgtcc tcggttgttg gtctcatcgc 3960
gcgctaaaca acctggacaa cagaaaaggc aaagcagtgt cctccgctcc gcagcaaaga 4020
agacaaatcg tcacttgtca gaggccgtca cccaagcaag caaactgcaa agcttgttcg 4080
tttggtttat cccgtagtac gcgccaacgc atgtgccgca ccgcgtttgc ggtggagagc 4140
gcaggcatgc atcaaccaac aaacgaaaca gtgcagttgc ttacagtgct ccatccctcc 4200
aaaaaaaaaa gttgcagtgc tctatctatc tatctacaca atcaacgcgg gcctcctgct 4260
ccttcgccgc aagccccgtt ccgtcctcag tcttcacgtg gattctgcaa cctccttcca 4320
gcagcttgtc accacggacg cttcctcgtg cgctgctcgc gtggcaccgg ccccgctttc 4380
cagcgtgctc cgcgcgggcc gcggccgcaa atcgcagacc caacacgcca cccgccaggg 4440
ggccgttcgt acgtacccgc ccctcgtgta aagccgccgc cgtcgtcgcc gtcccccgct 4500
cgcggccatt tccccggcct gaccccgtgc gtttacccca cagagcacac tccagtccag 4560
tccagcccac tgccgccgcg ctactcccca ctcccgctgc caccacctcc gcctgcgccg 4620
cgctctgggc ggaggaccaa cccgcgcatc gtaccatcgc ccgcccccgat cccggccgcc 4680
gccatgtcgt cggcggtcgc gtccgccgcg tccttcctcg cgctcgcctc cgcctccccc 4740
gggagatcac gcaggcgggc gagggtgagc gcgccgccac cccacgccgg ggccggcagg 4800
ctgcactggc cgccgtggcc gccgcagcgc acggctcgcg acggaggtgt ggccgcgcgc 4860
gccgccggga agaaggacgc gagggtcgac gacgacgccg cgtccgcgag gcagccccgc 4920
gcacgccgcg gtggcgccgc caccaaggta gttggttcgt tatgacttgc tgtatggcgc 4980
gtgcgcctcg agatcagctc acgaattgtt tctacaaaac gcacgcgctc gtgtgcaggt 5040
cgcggagcgg agggatcc 5058

<210> 2
<211> 844
<212> DNA
<213> Triticum aestivum

<400> 2
tctagagagg tcacccgtca gtctatccta agcgtgaagg ggtcatgagc caatcactct 60
aagcactcct gcacgtggcg cgactggtcg ggaccaagc ccacctctat atacacagca 120
ggcatgccgc tcaccccaac aatcagcccg cagtctgtac tgtgacatca ggcagagctt 180
tcgggaggaa ctgacgacgc tgaggggccc atacaccata atcccacggg gtgattagtg 240

tgtatatgcc agtgacagtc tcagatcaaa tactcaaatc ttgttgagcg tgttattaag 300
aaataacctt ggacatcgac cagggcccag gcccacttct ctcctaggtg gtctctacct 360
gccttgtcgt tccgccacgt tgaatcactc gaggctgtcg ggaacccagg cctatcacta 420
cctagatggt accatctatt ccttcagccc ttagttcgaa cattatcata agtattacgt 480
tattatatag tatatctgtg atcattggcc aaagagacca cggctcaata atgtagcaat 540
gcaaacggtg agactctagc agacaactaa catttattta ctttgcagcg aagcacgggt 600
gattcaagat agttctaatt tttttaaaga cggttctaat tcttttttt acggcaacac 660
ggttctaatt ctaccgttgc aacgcacaag gagatgtgct ggtctctaac aatgtatgta 720
ggagtttttt gttgcatgga tcggacggtt gaagatcgta atataagtca cctttgacgg 780
tcgggaaaat ggcggttatt tctgtgtttt cagacggctg acgcctggca atcaccccaa 840
aaat 844

<210> 3
<211> 880
<212> DNA
<213> Triticum aestivum

<400> 3
atttttgtat gcgaggagga tcacctgccg ccggctgaca tccgccacat cagtaggtta 60
ggccaactcc tccgcttgcc accgaattaa gctcgctgaa aagttcccct cccgacgctt 120
cgcaggtagg taggtgcatc catccccaac tccccggccg tgccgcacac ccccatctat 180
atatgcaaat ccagtccatt cctgatcaac caggacttga ttagtagagc aagaggcctg 240
aacaagcacg cgctcgcaga tcatcgacat gggttgtgag aggacgccgc tggccgttgc 300
tctggcactg gccctgctcc tgggcctcgc ccacggcgac gtggtgcagt tcatcttcgg 360
cgactcgctg tcggacgtgg gcaacaacaa ctacctgacc aagagcctcg cgcgcgcggc 420
gctgccgtgg tacggcatcg acttcggcag cggcatgccc aacggcaggt tctgcaacgg 480
ccgcaccgtc gcggacatca tcggcgacaa gatgggcctc ccgcgcccgc ccgcgttcct 540
ggacccgtcc gtggacgaga ccgtcatcgc caagagcggc ctcaactacg cgtccggcgg 600
cggcggcatc ctcaacgaga cctcgtccct cttcgtaaga cacccatcca tcacttcacc 660
aacttctcgt agctagacag catggtagta tcatgagaca tgaacgctcc ggttcgatca 720
tcgcatctga ctgagaccca tggcgcatgc atttgcagat ccagaggttc tcgctgtaca 780
agcagatcga gctgttccag ggacgcaggc cgttcatgcg ggagaagatc gggcgggcgg 840
cggcggacaa gctgttcggc gaggcctact acgtggtggc 880

<210> 4
<211> 516
<212> DNA
<213> Triticum aestivum

<400> 4
catgggcgcc aacgacttca tcaacaacta cctgctcccc gtctactccg actcgtggac 60
ctacaacggc gacaccttcg tcaagtacat ggtcaccacc ctggaggccc agctccggct 120
cctgcacggg ctgggcgcgc gccgggtcac cttcttcggg ctggggccca tgggctgcat 180
cccgctgcag cggctcctgc agaggtcctc cacggcgtgc caggagtcca ccaacaagct 240
cgccctcagc ttcaacaagc aggccggcgc ggtgatcagg gagctggcgg cgtcgctgcc 300
caacgccacg ttccagttcg gggacgtcta cgactacttc caggacatca tcgaccgccc 360
ctacatgcac ggcttcaaca actcccacgc gccctgctgc acgctcggca aggtgcggcc 420
gaccctgacg tgcaccccgc tctccacgct ctgcaaggac cgcagcaagt acgtgttctg 480
ggacgagtac caccccaccg acagggccaa cgagct 516

<210> 5
<211> 502
<212> DNA
<213> Triticum aestivum

<400> 5

catcgcgctc gagacgctca agcggctcaa catcaccgtc gttgccaaca ccacctccag 60
ctagcctgcc tgcctgccac cgacgccgcc caccaaaatg cgtacgcttc gacatgcatg 120
ggcgctgctg ctgtgtgttg tcttaattat actgcgggtg cttcgattgt aaccaaagta 180
ggatgatcga aaattctagg atgatgtcca agaaatggga tggagaatag atgcatgtac 240
gtgtcctgga tatgaaattt ttttgagtat gagagaacag cataccagga tcatgcatct 300
atcttaaatc tcaagaggcc actattaaga cgttgatgtt taagacggtg atgttctatt 360
tgcatgtgaa atttcaagtt caaagacggt accatttatg agctatggaa tcagccatga 420
atagtgatgt ttactgttga cactattcat tgctgctttt gtcttttggt aatgtgtttg 480
aacttggaaa tttcacatac ta 502

<210> 6
<211> 261
<212> DNA
<213> Triticum aestivum

<400> 6
atagaacatc acactcttaa gacgtaatat ttctttgaga ttttattttt gaaacttcgc 60
ctgaagggtg ctgatgtgcc cgctattcat ctaggagact aggaaaatat atgcaaaaaa 120
attcatacat atttaaaaat gataaatatg tatagagaaa atgtttatca actatagaaa 180
aatatatgca aaaaatataa atatgtatga atttttttag caagtattta aatctagcat 240
ttgaaagaaa aataaacaag t 261

<210> 7
<211> 327
<212> DNA
<213> Triticum aestivum

<400> 7
attagaaaaa tgttaaacgt gtatagaaaa atgttaccat gtaattaaaa attgtataaa 60
attatcatgt atttttaaaa aaataaccaa gcatttaaaa acaaatattt aaaaatgtta 120
ataaaggatt tgaaaaattc taaacgtgta tacaaaaatg ttgaccatgt attaaaaaat 180
gttaatcttg tatttaaaaa tgtaatcaag catttagaaa aacagttaaa ttgtatagaa 240
atgtacccag aaaatcttga tattatattt caaaaatgta atcaagcatt tgaaaaatat 300
tttaaaaatg tgtatagaaa aaatgtt 327

<210> 8
<211> 236
<212> DNA
<213> Triticum aestivum

<400> 8
aaccatgtat ttaaaaaatt ttaaacttgt atttgaaaca tgttaatcat gtattagata 60
tataccaaat atgtatgtaa aataacaatg aaaatccaag ggaaacgaaa gaaaaacaaa 120
tgaaaacggg aaaaaaacaa aaaatgaagg aaaaaaaaga aaaaacattg aaaaccaaga 180
aagaaacaaa gagaaccgga gaataacaaa caaaagggaa agaaaaggtg aaaaaa 236

<210> 9
<211> 504
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: -

<400> 9

ctagtaaaaa caagaaacaa agaaaaaagg atgacaaaca aggaaaaaaa ttaaaaatcc 60
ggaaaggcaa cggtaagacg actcttttcc ttcaagttgg tagcgcccta ccagggtaac 120
acgaacttga cgatgacttt atggctagga gagctacgct ggaacgagga gatccggacc 180
aaaccatgtg cgctacaaaa gtgtattatt attttttgca aaaatgatcc gaatctatta 240
tcaaaattca gcgaaataca aaacatctcg aacataatga acaatacatt gagattccag 300
gaccccaaac aaccactact gccgcgaaga aaaaaggatt gggaggacag aaattatcct 360
aaccacgttc gtcctcggtt gttggtctca tcgcgcgcta aacaacctgg acaacagaaa 420
aggcaaagca gtgtcctccg ctccgcagca aagaagacaa atcgtcactt gtcagaggcc 480
gtcacccaag caagcaaact gcaa 504

<210> 10
<211> 441
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: -

<400> 10
agcttgttcg tttggtttat cccgtagtac gcgccaacgc atgtgccgca ccgcgtttgc 60
ggtggagagc gcaggcatgc atcaaccaac aaacgaaaca gtgcagttgc ttacagtgct 120
ccatccctcc aaaaaaaaaa gttgcagtgc tctatctatc tatctacaca atcaacgcgg 180
gcctcctgct ccttcgccgc aagccccgtt ccgtcctcag tcttcacgtg gattctgcaa 240
cctccttcca gcagcttgtc accacggacg cttcctcgtg cgctgctcgc gtggcaccgg 300
ccccgctttc cagcgtgctc cgcgcgggcc gcggccgcaa atcgcagacc caacacgcca 360
cccgccaggg ggccgttcgt acgtacccgc ccctcgtgta aagccgccgc cgtcgtcgcc 420
gtcccccgct cgcggccatt t 441

<210> 11
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 11
ctgctggaca ggatatggaa 20

<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 12
tcgcgctgca gggcctcctt 20

<210> 13
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: -

<400> 13
tcacgtggat tctgcaacct c 21

<210> 14
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 14
caggacggac catggcggcg gccgggat 28

<210> 15
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 15
cgccgccatg gtccgtcctg tagaaaccc 29

<210> 16
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 16
gtgatgtcag cgttgaactg c 21